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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/985,780	11/06/2001	Akira Yamamoto	122.1474	4517

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EXAMINER

TRAN, HENRY N

ART UNIT PAPER NUMBER

2674

DATE MAILED: 05/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/985,780

Applicant(s)

YAMAMOTO ET AL.

Examiner

HENRY N TRAN

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2,5,6,10,11,14,17,18,22 and 23 is/are allowed.
- 6) ☒ Claim(s) 1,3,7,9,12,13,15,19,21 and 24-26 is/are rejected.
- 7) ☒ Claim(s) 4,8,16,20 and 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/14/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 2674

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114.

Applicant's submission filed on 2/14/05 has been entered.

2. The indicated allowability of claims 1, 3, 7, 9, 10, 12, 13, 15, 19, 21, and 24-26 are withdrawn in view of the newly discovered references to Shigeta (U.S. Patent No. 6,369,782), Correa et al (U.S. Patent No. 6,714,250), and JP Publication NO. 05-127612. Rejections based on the newly cited references follow.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an

Art Unit: 2674

international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1, 12, 13, 24, 25 and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Shigeta (U.S. Patent No. 6,369,782).

5. Re claims 1, 13, 25 and 26, Shigeta teaches an apparatus methods of driving a display apparatus, in which a frame comprises n subfields (or subfields), e.g., $n=5$, SF0 ~ SF4, each subfield has an address period to select cells to be displayed and a light period to light the selected cells, and a gradation scale is represented by combining the subfields to be lit among said plural subfields, wherein two brightest subfields, SF4 and SF3, in said frame have different brightnesses, and the two brightest subfields are arranged apart at an interval of about half a length of said frame as illustrated in Figs. 2 and 6; see col. 1, lines 21-26; col. 2, lines 24-32; col. 5, line 61 to col. 6, line 6; also, Fig. 15, col. 10, lines 36-61. Shigeta further teaches a control unit comprising a control circuit 13 and a frame memory 16 to provide a frame of pixel data of the bit corresponding to each subfield of the n subfields; see Fig. 2; and col. 5, lines 7-15.

6. Re claims 12 and 24, Shigeta further teaches a plural arrangement orders of the plural subfields, SF0 ~SF4, in said frame are memorized in accordance with the types of images of different luminance level to be displayed, and display is performed with an arrangement order in said subfield selected from said plural arrangement orders according to the judged types of the images; see Figs. 4 and 5; and col. 5, lines 58-60.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3, 7, 9, 15, 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shigeta (U.S. Patent No. 6,369,782) in view of Correa et al (U.S. Patent No. 6,714,250, hereinafter referred to as “Correa”).

Shigeta teaches all the claimed limitations except for:

- (i) the “rest period”, which is occurred because a total length of said plural subfields is shorter than that of a frame, said rest period is divided into plural rest periods and the divided rest periods are arranged between different plural subfields (claims 3, 7, 15 and 19); and
- (ii) a plural subfields are classified into a front frame and a rear frame so that one of two most brightness-weighted subfields belongs to said front frame and a remaining one of the two most brightness-weighted subfields belongs to said rear frame, and an interval between respective start timings of said front frame and said rear frame remains fixed, regardless of variations in length of either or both of the front and rear frames (claims 9 and 21).

Correa teaches a plasma display panel (PDP) 10 and display methods of driving said display panel, in which a frame comprises n subfields, subfields are organized into 2 subfield groups, e.g., G1 (which is read on the claim element “a front frame”) and G2 (which is read on the claim element “a rear frame”); wherein, a rest period, which is a vertical blanking period, occurs in said frame when a total length of said plural subfields is shorter than that of said frame

Art Unit: 2674

and a rest, said rest period is divided into plural rest periods, e.g., 2 vertical blanking periods, VFB1 and VFB2; and arranged between different subfields, or at the ends of two subfield groups as illustrated in Fig. 3; see col. 3, lines 37-51; and wherein, one of two most brightness-weighted subfields, e.g., subfields 40, belongs to said front frame and a remaining one of the two most brightness-weighted subfields, another subfield 40, belongs to said rear frame, and an interval between respective start timings of said front frame and said rear frame remains fixed, which is 10.0 ms, regardless of variations in length of either or both of the front and rear frames, see Fig. 3.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the divided reset, the subfields arrangements, and the start timings as taught by Correa in the Shigeta device because this would provide an improved display system which enables to avoid artifacts and improved picture quality; see Correa, col. 3, lines 6-8.

Claims 3, 7, 9, 15, 19 and 21 are therefore rejected based on the rationale discussed above.

Allowable Subject Matter

9. Claims 2, 5-6, 10-11, 14, 17-18, and 22-23 are allowed.

10. Claims 4, 8, 16, 20, and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

11. Applicant's arguments with respect to claims 1-27 have been considered but are moot in view of the new grounds of rejection.

Art Unit: 2674

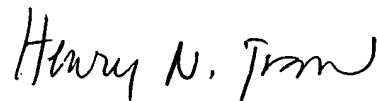
Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HENRY N TRAN whose telephone number is 571-272-7760.

The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, PATRICK N EDOUARD can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



HENRY N TRAN
Primary Examiner
Art Unit 2674

5/6/05